



Grid Deployment Office Grid & Transmission Programs Conductor



Grid Deployment Office

Mission Statement: The Grid Deployment Office (GDO) works to provide electricity to everyone, everywhere by maintaining and investing in critical generation facilities to ensure resource adequacy and improving and expanding transmission and distribution systems to ensure all communities have access to reliable, affordable electricity.

Power Generation Assistance Division

- The Power Generation Assistance Division works with existing generation facilities to ensure resilience and reliability.

Transmission Division

- The Transmission Division supports innovative efforts in transmission reliability and clean energy analysis and programs, and energy infrastructure and risk analysis in support of the Administration's priorities to enhance grid resilience.

Grid Modernization Division

- The Grid Modernization Division oversees activities that prevent outages and enhance the resilience of the electric grid.



Grid Resilience Funding Available through BIL

Formula Grants	Funding Amount	Program Goal
Grid Resilience Formula Grants Preventing Outages and Enhancing the Resilience of the Electric Grid / Hazard Hardening (Sec. 40101(d))	\$2.5 billion	<ul style="list-style-type: none">Formula funding for Grid Resilience and Hardening Investments tied to State & Tribal led objectives, criteria and methods for resilience investments
GRIP Program	Funding Amount	Program Goal
Grid Resilience Industry Grants Preventing Outages and Enhancing the Resilience of the Electric Grid / Hazard Hardening (Sec. 40101(c))	\$2.5 billion	<ul style="list-style-type: none">Competitive funding for Grid Resilience and Hardening Investments tied to State & Tribal led objectives, criteria and methods for resilience investments
Smart Grid Grants Deployment of Technologies to Enhance Grid Flexibility (Sec. 40107)	\$3 billion	<ul style="list-style-type: none">Deployment of technology at scale, prioritization of technologies that increase transmission capacity, mitigate wildfires, manage load / electrification of “edge devices”, and incorporate secure communications / cybersecurity
Grid Innovation Program Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency (Sec. 40103(b))	\$5 billion	<ul style="list-style-type: none">Large infrastructure projects, including transmission, distribution and storage.Partnership between State entities and project/infrastructure developers

BIL, IRA and Other Transmission Funding Programs

Program Name (DOE)	Total Funding	Program Goal
BIL: Transmission Facilitation Program	\$2.5 billion	<ul style="list-style-type: none">Transmission deployment of new and upgrading high-capacity transmission lines. 3 tools: Capacity contracts, loans, and public-private partnerships
IRA: Transmission Facility Financing	\$2 billion	<ul style="list-style-type: none">Loans for projects designated by the Secretary to be necessary in the national interest under section 216(a) of the Federal Power Act
Loan Programs Office: Title 17 Innovative Clean Energy Loan Guarantee Program	\$40 billion in loan guarantee authority	<ul style="list-style-type: none">Innovative transmission expansion projects and emerging technologies (including HVDC deployment) are eligible
Loan Programs Office: Title 17 Energy Infrastructure Reinvestment (EIR) Financing (Loan Guarantees)	\$250 billion in loan authority	<ul style="list-style-type: none">Retool, repower, repurpose or replace energy infrastructure (including transmission) that has ceased operations or enable operating energy infrastructure to avoid air pollutants
Western Area Power Administration Transmission Infrastructure Program	\$3.25 billion	<ul style="list-style-type: none">Debt financing for qualifying transmission projects with at least one terminus in WAPA's 15-state footprint and that facilitate delivery of renewable energy

Transmission Facilitation Program (TFP)

TFP is \$2.5 Billion in revolving fund borrowing authority.

The TFP is a **revolving** fund program that will provide Federal support to overcome the financial hurdles in the development of large-scale new transmission lines, upgrading of existing transmission, and the connection of microgrids in select States and U.S. territories.

- First RFP will focus on projects that can begin construction by year-end 2027
- Best fit for projects that are nearly "shovel ready" and are in regions that rely on firm point-to-point transmission
- TFP designed for projects that would otherwise not be constructed without support
- Will NOT include projects that already are fully subscribed or have a fully allocated source of revenue

Financing Tools:

1. Capacity Contracts

- Buy up to 50% of planned line rating for up to 40 years
- Sell capacity contract to recover costs

2. Loans

3. Public Private Partnerships

- Within a national interest electric transmission corridor (NIETC)
- Necessary to accommodate an increase in electricity demand across more than one state or transmission planning region



State, Territory, & Tribal Formula Grid Resilience Grants

\$2.5 Billion (approximately \$500 million per year for FY 22-26)

- Formula based on population, area, probability, severity of disruptive events and expenditure on mitigation efforts.
- States, Territories, and Tribes funded via annual formula grant
 - 15% cost match
- States, Territories, and Tribes may subgrant to eligible entities for projects
 - 100% cost match for subgrantee
- **FY22 Grants range:**
 - States: \$1.5M - \$33.8M
 - Territories: \$700K - \$3.7M
 - Tribes: \$30K - \$2.1M

Goals & Objectives:

- Demonstrate measurable improvements in **energy resilience** to all hazards in the United States and mitigate climate-related risk,
- Invest in **modernized grid infrastructure** that can enable consumer access to lower-cost energy and accommodate increased electrification, increased penetrations of variable renewable electricity and distributed energy resources, and other evolving system needs over the coming decades,
- Invest in **clean energy** and **decarbonization solutions** to achieve a carbon-free power sector by 2035 and net-zero greenhouse gas emissions economy-wide by 2050, and
- Create **good-paying jobs** with the free and fair choice to join a union

FY22 applications are open now



Eligible Investments for Grid Resilience Grants

- Utility pole management
- Hardening of power lines, facilities, substations, of other systems
- Undergrounding of electrical equipment
- Replacement of old overhead conductors and underground cables
- Relocation of power lines or the reconductoring of power lines with low-sag, advanced conductors
- Vegetation and fuel-load management
- Weatherization technologies and equipment
- Fire-resistant technologies and fire prevention systems
- Monitoring and control technologies
- Use or construction of distributed energy resources for enhancing system adaptive capacity during disruptive events, including microgrids and battery-storage subcomponents
- Adaptive protection technologies
- Advanced modeling technologies

Resilience measures that are **NOT** allowed under this provision include:

Construction of a new - electric generating facility; or large-scale battery-storage facility that is not used for enhancing system adaptive capacity during disruptive events; or cybersecurity.



Grid Resilience and Innovation Partnerships (GRIP) Program

These programs will be released as one funding opportunity but provide opportunities for various applications to various entities including States, Tribes, utilities, and industry.

- 1. Utility & Industry Grid Resilience Grants (Competitive)**
- 2. Grid Innovation Program (Competitive)**
- 3. Smart Grid Grants (Competitive)**

Request for Information (RFI) and Draft Funding Opportunity Announcement (FOA) closed October 14, 2022

FOA release expected mid-November for FY22 and FY23 funding (~\$4.2 billion).



1. Competitive Utility/Industry Grid Resilience Grants

**\$2.5B Total (\$500 million/year FY 22-26)
FY22 and 23: Up to \$1 Billion**

Eligible Entities

- Grid operators
 - Storage operators
 - Electricity generators
 - Transmission owners or operators
 - Distribution providers
 - Fuel suppliers
- Capped at the amount the eligible entity has spent in the previous 3 years on hardening efforts
 - Small Utility Set Aside (for those selling no more than 4 million MWh of electricity per year)
 - Must match 1/3 of grant amounts received
 - At least 30% must go to small utilities
 - **Cost Match = 100%**

Prioritize projects generating the greatest community benefit in reducing the likelihood and consequences of disruptive events.



2. Grid Innovation Program

**\$5B Total (\$1 billion/year for FY22–26)
FY22 and 23: Up to \$2 Billion**

- Demonstrate innovative approaches to transmission, distribution, and storage to harden and enhance resilience and reliability; and
- Demonstrate new approaches to enhance regional grid resilience implemented through States by public and rural electric cooperative entities on a cost-shared basis.
- Eligible Entities
 - a State;
 - a combination of 2 or more States;
 - an Indian Tribe;
 - a unit of local government;
 - a public utility commission

Cost Share: Minimum 50% non-federal cost share of total project costs



2. Grid Innovation Program (continued)

Primary Objectives:

- Ensure reliable grid operations
- Improve overall grid resilience
- Enhance collaboration between eligible entities and private and public sector owners and operators on grid resilience
- Contribute to the decarbonization of the electricity and broader energy system
- Provide enhanced system value, improve current and future system cost-effectiveness and deliver economic benefits

Areas of Interest for Applications:

- Transmission capacity enhancements
- Advanced distribution grid assets and functionality
- Combined systems demonstrating innovative approaches



3. Smart Grid Grants

**\$3B total (\$600 million/year FY 22-26)
FY22 and 23: Up to \$1.2 Billion**

- **Grants to support the deployment of technologies to enhance grid flexibility**
- **Open Eligibility**
 - Institutions of higher education;
 - For-profit entities;
 - Non-profit entities;
 - State and local governmental entities, and Tribal nations.
- **Cost Share: 50% non-federal cost share of total project costs**

Goals & Objectives:

- **Increase Transmission Capacity**
 - Grid Enhancing Technologies
- **Mitigate Wildfires**
 - Asset Management Technologies
- **Load Management/Electrification of “edge devices”**
 - Managed Charging/Grid Infrastructure and autonomous control
- **Incorporate Secure Communications/Cybersecurity**

The Smart Grid Investment Grant (SGIG) program was previously funded under the Recovery Act, which awarded \$3.5 Billion of grants during FY 2009 & 2010 for activities through FY 2015



Smart Grid Grant Priority Investment Areas

- **Increasing transmission capacity and operational transfer capacity**
 - Grid enhancing technologies such as dynamic line rating, flow control devices, advanced conductors, and network topology optimization, to improve system efficiency and reliability.
- **Improving the visibility of the electrical system to grid operators**
 - Help quickly rebalance the electrical system with autonomous controls through data analytics, software, and sensors.
- **Enhance secure communication and data flow between distribution components:**
 - Investments in optical ground wire, dark fiber, operational fiber, and wireless broadband communications networks.
- **Aggregation and integration of distributed energy resources and other “grid-edge” devices to**
 - Provide system benefits, such as renewable energy resources, electric vehicle charging infrastructure, vehicle-to-grid technologies and capabilities, and smart building technologies.
- **Enhancing interoperability and data architecture of systems that support two-way flow of both electric power and localized analytics to provide information between electricity system operators and consumers.**
- **Anticipate and mitigate the impacts of extreme weather or natural disaster on grid resiliency**
 - Investments to increase the ability to redirect or shut of power to minimize blackouts, prevent wildfires, and avoid further damage.



Additional DOE transmission funding available

IRA: Transmission Facility Financing within the Grid Deployment Office

- Provides \$2 billion in direct loan authority for facility financing.
- For projects designated by the Secretary to be necessary in the national interest under section 216(a) of the Federal Power Act

Loan Programs Office

- Through Title 17 LPO has \$40 Billion in loan authority, for which innovative transmission expansion projects and emerging technologies (including HVDC deployment) are eligible.
- Through Sec. 1706, Energy Infrastructure Reinvestment Program, LPO has \$250 Billion in loan authority to retool, repower, repurpose or replace energy infrastructure (including transmission) that has ceased operations or enable operating energy infrastructure to avoid air pollutants.

Western Area Power Administration Transmission Infrastructure Program

- \$3.25 Billion in debt financing/development assistance for qualifying transmission projects with at least one terminus in WAPA's 15-state footprint and that facilitate delivery of renewable energy



Current Status & Timeline of Funding

Transmission Facilitation Program

- First round solicitation available Fall '22

Grid Resilience Formula Grants

- FY22 applications extended to 3/31/23
- Funds disbursed on a rolling basis

Grid Resilience & Innovation Programs (GRIP)

- RFI open for comment 8/30/22 - 10/14/2022
- FOA open Fall '22
 - Grid Resilience Utility & Industry Competitive Grants – 40101(c)
 - Grid Innovation Program – 40103(b)
 - Smart Grid Grants – 40107

Loan Programs Office Transmission Loans

- Open for Applications

WAPA Transmission Infrastructure Program (TIP)

- Open for Applications

Transmission Facility Financing (Inflation Reduction Act)

- TBD

